WHAT IS CLAIMED IS:

1. A display unit comprising an image displaying means having pixels arranged two-dimensionally, a plate-shaped illumination means having fine light-emitting points arranged two-dimensionally corresponding to the pixels and being placed on the backside of the image displaying means, and fine optical elements for introducing light emitted from the fine light-emitting points arranged two-dimensionally corresponding to the pixels to the respective pixels, wherein the each of the pixels, and the fine optical element and the fine light-emitting point corresponding to the pixel are arranged so that optical axes connecting the respective fine light-emitting points and the respective fine optical elements corresponding thereto pass through the pixels corresponding to the fine optical elements and the fine light-emitting points and the optical axes intercross substantially at a prescribed point within a distance of a near point of vision of an eye from a display face of the image display means, and the fine optical elements form a virtual image of the fine light-emitting points corresponding thereto at a distance longer than a distinct vision distance of the eye from the prescribed point.

2. The display unit according to claim 1,

wherein the fine optical element is constituted of a refractivity-variable plate-shaped element.

3. The display unit according to claim 2, wherein the plate-shaped element is a liquid crystal panel element.

4. The display unit according to claim 1, wherein the plate-shaped illumination means comprises a surface light source, and a barrier means having apertures arranged two-dimensionally corresponding to the pixels and serving as the fine light-emitting points by transmitting the light from the surface light source.

5. The display unit according to claim 4, wherein the distance L between the display face of the image displaying means and the prescribed point, the size D of the display face, the focus length f of the fine optical element, and the size W of the aperture satisfies the relation:

$$W \leq f \times D/L$$

6. The display unit according to claim 4, wherein the barrier means is capable of switching a transmission mode to an aperture formation mode to allow the light of the surface light source to pass

through the apertures, or to an entire transmission mode, by switching.

7. The display unit according to claim 4, wherein the barrier means is a liquid crystal panel element.

8. The display unit according to claim 6, wherein a hard switch is provided additionally for switching the transmission mode of the barrier means.

9. The display unit according to claim 6, wherein a sensor is provided for detecting the approach of the face of an observer to the display face of the image display means, and the transmission mode of the barrier means is switched in accordance with the detection output of the sensor.

10. The display unit according to claim 6, wherein a means for switching inter-connectedly the transmission mode of the barrier means and a displayed content of the image display means inter-connectedly is provided additionally.

11. The display unit according to claim 6, wherein a means of switching a displayed content of the image display means, and a means of switching the

transmission mode of the barrier means are provided additionally.

12. A display method, employing the display unit according to claim 6, enabling monocular observation of magnified displayed information from the prescribed point or vicinity thereof by switching the barrier means to the aperture formation mode to allow the light of the surface light source to pass the apertures, and enabling binocular observation of non-magnified information from a distance longer than distinct vision distance from the display face of the image display means by switching the barrier means to the entire transmission mode.

13. A display instrument, employing the display method according to claim 12.

14. A display unit comprising a reflecting type display element having a reflection face having pixels and apertures corresponding to the pixels for transmitting light beams, a surface light source placed on the back face of the display element, and microlenses arranged two-dimensionally in front of a display face of the display element corresponding to the pixels, wherein the microlenses, the pixels and apertures corresponding respectively to the microlenses

are arranged such that the optical axes connecting the corresponding microlens, pixel, and aperture intercross at substantially one point at a magnified image observation position at a distance shorter than the near point of vision on the opposite side of the display element relative to the two-dimensionally arranged microlenses, and the microlenses form a magnified virtual image of the corresponding apertures at a distance longer than the distinct vision distance.

15. The display unit according to claim 14, wherein color filters are provided corresponding to the respective pixels of the display element.

16. The display unit according to claim 15, wherein the color filters are arranged in substantially close contact with the microlens side of a transmissive substrate which is a substrate on the display face side of the display element.

17. The display unit according to claim 15, wherein the color filters are arranged in substantially close contact with the observation side of the microlens.

18. The display unit according to claim 14, wherein a lower substrate which is a substrate on

backside of the display element is transparent, and the reflection face and the apertures are formed on the surface light source side of the lower substrate.

19. The display unit according to claim 14, wherein the lower substrate which is a substrate on the backside of the display element is an opaque reflecting substrate having a reflection face, and the apertures of the reflection face are holes formed at the reflecting substrate and filled with a transparent thin film.

20. The display unit according to claim 14, wherein the microlenses focuses roughly on the positions of the apertures respectively.

21. The display unit according to claim 14, wherein the surface light source is turned on or off in accordance with output of a hard switch outside the display element, output of a sensor detecting approach of a face of an observer to the display element or by clicking a displayed item of the display element.

22. The display unit according to claim 14, wherein a magnified virtual image of the apertures is observable at or near the observation position with the surface light source turned on.

23. A display method, employing the display unit according to claim 14, which displays a magnified image by turning-on of the surface light source to be observed monocularly at or near the observation position, and displays a non-magnified image by turning off the surface light source to be observed at a position from a distance not shorter than a distinct vision distance from the display face.

24. A display instrument, employing the display unit according to claim 23.

25. A display instrument, employing the display unit according to claim 14.

26. A display unit enabling monocular observation of a magnified virtual image larger than a pixel portion by looking at the pixel portion with one eye, comprising the pixel portion near to an observer, a light source at a position distant from the observer, a magnifying optical system between the eye and the light source, and enabling observation of non-magnified image of the pixel portion by looking the pixel portion with both eyes.